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Tweeds System of Farm Accounting

Book of Instructions

Tweeds System of Farm Accounting

By Henry E. Tweed

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Tweeds System of Farm Accounting

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INTRODUCTION

It is necessary for a farmer to know how much he is making or losing on his business each year, how much he is making or losing on each variety of apples, pears, peaches or other crops and how much he can improve his business so as to make more money. Cost accounting, for the grower is the same sort of work which the large manufacturing concerns are doing to learn whether they make a profit on certain commodities. The grower wishes to learn whether his varieties of apples and whether his other fruits or crops pay. All these things will be shown by this set of farm cost accounts.

The desire to keep accounts of this sort is evidenced by many growers, but they do not know how to start. Undoubtedly many are deterred from starting because of their ignorance of bookkeeping and because they have in mind no definite method of procedure. It is believed that the system outlined in this book of instructions will be helpful to those who desire to keep accounts and who have not worked out a system for themselves.

KNOWLEDGE OF BOOKKEEPING NOT REQUIRED

According to G. F. Warren, of Cornel University, bookkeeping knowledge is unnecessary. Commercial bookkeeping training, in most cooperative work, has been a detriment rather than a help. This is due to the fact that trained bookkeepers are apt to use complex technicalities, suitable for a business house but which have no place for a practical grower who wishes to do cost accounting.

DIFFICULTIES OF FARM BOOKKEEPING

There are several reasons why farm accounts are different from those of the city merchant. The storekeeper deals with actual figures; that is, he knows definitely what each article costs him and what he receives for it. His records are not nearly so subject to variations in values from time to time as is the case of the farmer. Professor Bailey says: "The entire subject of farm ac-

counting must be attacked in a new way. The ordinary bookkeeping will not apply." The reason is obvious. Farming is a much more complicated business than most people suppose.

A famer is both a producer and a dealer. He needs financial records as complete as the average merchant and cost records as accurate as those of the manufacturer. But the records must be adapted to the business in hand. "The ordinary bookkeeping will not apply." The farmer is usually a busy man. What he wants is a plain, simple, straightforward history of his business, so arranged and classified as to require the minimum effort to keep it up.

SIMPLICITY OF THIS SYSTEM

This system of cost accounting eliminates all the disadvantges of writing the different items of expense, income receipts and man and horse hours under the different departments of the farm.

The principal idea worked out in this system is to do away with any writing on the part of the grower during the busy season. Instead of writing the different items of expense, etc., the grower keeps a time record of hired help, horses and himself by making a tabulation on the different forms. All that is necessary to keep accurate accounts is to enter the number of hours worked and purchases and sales made. The first three forms of Tweeds System will give an accurate set of costs to complete the remaining outlined forms.

REQUIREMENTS FOR FARM COST ACCOUNTS

Several records are necessary for a complete set of farm accounts:

(1) An inventory at the beginning and at the end of the year.

(2) An account of all money paid out or received.

(3) A record of all work done by men and horses during the year.

INVENTORY

Generally an inventory requires from two to five hours' work at the beginning and at the end of the year on an average sized farm. Only one inventory is necessary for closing one year's accounts and starting the next, making it possible to do this work all at one time. The inventory should comprise a detailed list with values of the following: The farm, subdivided into buildings and land, each building listed separately, with the number of acres of land and its value per acre; the machinery, each item being listed separately, except collecting the small tools as one item; account of feed on hand; increase or decrease in capital, cash on hand and money in bank; and bills receivable. The mortgage and bills payable, if any, should be subtracted from the total and the difference will be what the grower is worth above debts, or his present net worth.

The price of a farm should neither be over or under estimated and the value put upon the land should be what it is considered worth at a normal sale. To save trouble it is always best to use fair judgment and be unbiased.

VALUE OF INVENTORY

An annual inventory will be a better investment for the time and labor expended than any other account. The farmer can accurately compute whether he has made a gain or loss, and how much, by comparing the net worth as shown by the current inventory with the net worth shown by that of the previous year.

The annual gain or loss of the farm business will be shown by the annual inventory. The farmer will be surprised to note which accounts show a gain and which a loss when he begins to use the cost account system. A complete system of accounts of this kind is the only way to obtain these results.

CONCLUSION

Unless conclusions are drawn enabling one to make his business more profitable in the future, these farm accounts will be of little value. The study of the different items of cost and returns in an account is just as important as to know whether or not it pays, for from such a study the cost of production may be reduced and a losing enterprise made to pay or a profitable one made more profitable. Weather, field crop, and market conditions for the year as compared with an average year must be considered and it must be kept in mind that the results are from just a single year. For instance the apple crop in 1912-1914 showed large losses on many orchards because of the low prices and lack of distribution. However, by studying the apple account to find the cost of producing a box, then by considering both an average yield and prices for the locality, one could draw the conclusion that ordinarily it would or would not be profitable business to raise apples on most of the orchards where apples are raised.

There are other ways in which the accounts may be useful besides the satisfaction of actually knowing what crops paid and how much. This system of cost accounts may be used to study the seasonal distribution of labor on the farm as a whole and on separate enterprises, and also to determine what enterprises and what crops are the most profitable. Also the grower can find how his efforts compare with those of other growers as to economy of labor and many other points by comparing his results with the facts detailed in this system.

The value of labor is especially impressed upon the grower who keeps cost accounts. He finds from this that time represents money and that it is equally as important to save one as the other. He sees that it is more wasteful to keep a horse or team idle than to have one man idle for the same length of time. It may be surprising to note that very often the leargest yields of certain crops do not pay if cost accounts are kept. It may be found that the crop which the grower thinks the most profitable and to which he devotes most of his time is being produced at a loss, while the steadier, more common kind of field crop may be the only one that shows a profit.

The purpose of this system of cost accounting is to offer suggestions to growers who have kept accounts but who have not been satisfied with the results obtained. It can also be followed as a guide by many others who have wished to keep accounts but have not known how to make a beginning.

LABOR RECORD

The name of the individual employed should be listed on the form as illustrated below. The number of hours spent on the different operations should be indicated by figures in the date column.

At the end of the month the total number of hours consumed on the different kinds of work should be added and listed in the total column.

To find the rate per hour:—If hired help is paid $65.00 per month, divide the total number of hours into the wage paid per month.

If labor is paid 25 cents per hour as illustrated in this form, a simple method of determining the cost of different kinds of work is obtained by dividing the total number of hours of labor performed by 4.

Tweeds System of Farm Accounting — TRADE MARK REGISTERED — FORM NO. 1

MAN OR HORSE MONTHLY LABOR SHEET — NO. 31

Time of Roy Gannon from Oct. 1 1916 to Nov. 1 1916 inclusive

	KINDS OF LABOR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	Rate	Amount
Growing Cost	Pruning																																	25¢	$
	Brush Burning																																		
	Spraying																																		
	Tree Care											10																					10		2 50
	Cultivating																																		
	Irrigating and Ditching																																		
	Cover Croping																																		
	Fertilizing																																		
	Thinning																																		
	Fropping																																		
Overhead	Management																																		
	Repairing		10						1				5																				16		4 00
	Feed																																		
Harvesting Costs	Haul to and From Town								W 9																								9		2 25
	Making Boxes			7																													7		1 75
	Haul to and From Orchard			3																													3		75
	Picking	W 10																															10		2 50
	Sorting				10	10	10		10					10		10	10	10	10				10	10	10		10	10					140		35 00
	Packing																			10	10												20		5 00
	Waiting on Packers										5																			10	10	10	35		8 75
	Nailing and Stamping										5																						5		1 25
Other Costs	Land Improvements																																		
	Building												5																				5		1 25
	Alfalfa or																																		
	Live Stock																																		
	Personal																																		
	A M	A										A																							
	Field or Block P M											B																				Total	260	25¢	$65 00

LABOR RECORD

If horse record is kept, a separate form should be used for each team or horse if driven separately. In case a man is driving the team continuously, the record for both can be placed on one sheet.

If a field or tract account is desired, an initial or number can be placed in the date columns illustrated above.

DISTRIBUTION SHEET OF EXPENSES

The most convenient method of using this form is to tabulate the different expenditures from the monthly statement received from the merchant or elsewhere. As an illustration, May 1st a statement is received from Smith Merchantile Co. for $51.50, the different items of expense are segregated into the different named columns.

Tweeds System of Farm Accounting — FORM No 2

TRADE MARK REGISTERED

DISTRIBUTION SHEET OF EXPENSES

DEBIT AND CREDIT ACCOUNT					GROWING COSTS									
Check No	Bills & Accts Payable Dr	PURCHASED FROM OR ISSUED TO	Date	Bills & Accts Payable Cr	Lead	Sulphur	Other Sprays	Gasoline	Oils	Pruning Tools	Cultivating Tools	Fertilizing	Cover Crops	Seed
	$			$										
	10	Smith Mercantile Co.	May 1	51 50	12		5	6						
	25 31	Chelan County	3	25 31										
	30 10	Farmers Cooperative Store	10	30 10					2		3			4 50
	20	Highland Canal Co.	11	20										
	18 50	Western Lumber Co.	11	18 50										
	103 91	TOTALS		145 41	12		5	6	2		3			4 50

For simplicity in keeping a debit and credit account the total amount of statement is entered into the credit account of bills and accounts payable. If part or total payment on account is made the amount is entered into the debit account of bills and accounts payable. As illustrated above $10 is applied on Smith Merchantile Co. debit account, leaving a balance due them of $41.50.

Tweeds System of Farm Accounting — FORM No 3

TRADE MARK REGISTERED

DISTRIBUTION SHEET OF RECEIPTS

DEBIT AND CREDIT ACCOUNT					FRUIT RECEIPTS								
Receipt No	Bills & Accts Receivable Cr	RECEIVED FROM	Date	Bills & Accts Receivable Dr	Berries	Apples	Peaches	Pears	Cherries	By-Products
	50	Thomas Jones	May 1	100						
	18 70	Farmers Cooperative Store	12	18 70						
	16	Fred Clark	13	16						
	5	George Watt	June 5	6	6					
	15	Lusher McCormick	14	15						
	107 70	TOTALS		157 70	6					

DISTRIBUTION SHEET OF RECEIPTS

The toal amount of products, etc. sold is entered into the debit account of bills and accounts receivable. When part or total payment is made or the

Tweeds System of Farm Accounting — FORM No 4

TRADE MARK REGISTERED

DISTRIBUTION SHEET OF LABOR

DEBIT AND CREDIT ACCOUNTS					GROWING COSTS								
Check No	Bills & Accts Payable Dr	ISSUED TO	DATE	Bills & Accts Payable Cr	Pruning	Brush Picking	Spraying	Tree Care	Cultivating	Irrigation and Ditch	Cover Cropping	Fertilizing	Thinning	Propping
	20 00	Myron Peterson	July 1	62 50			17	22 25		10 50				
	59 00	Mark Foster	1	59					31					
	45 00	Russel Boone	Aug 30	45										
	48 25	Roy Gannon	30	48 25										
	18 00	Wm Simonds	30	18										
	190 25	TOTALS		232 75			17	22 25	31	10 50				

products, etc., are sold it is entered into the credit account of bills and accounts receivable.

For illustration the total amount of bills and accounts receivable credit, is $107.70, subtract this amount from $157.70 the total debit, which leaves a difference of $50.00, the amount at the close of these accounts still due you, and by referring to the different items of receipts you find Thomas Jones still

FROM May 1 1915 TO June 1 1915 NO. 2

OVERHEAD COSTS							HARVESTING COSTS				DIVERSIFIED COSTS						
Water Assessments	Repairs	Tax on Utilities	Blacksmithing	Hardware	Feed	Interest for crops	Paper	Picking Implements	Boxes	Nails	Buildings	New Mch'y	New Tools	Live Stock	Donations	Personal
												26 50				
	1 30				2 50											16 70
20 00																
				2 50							16 50					
20	1 30			2 50	2 50						16 50	28 50				16 70

owes you $50.00 for a horse sold him May 1.

DISTRIBUTION SHEET OF LABOR

The labor distribution sheet serves the purpose of segregating the labor items which are obtained from form 1, under the different named columns. The debit and credit accounts in form 2 are applied to this form in the same manner.

FROM May 1 1915 TO 19 NO.

CROP RECEIPTS					STOCK RECEIPTS					MISCELLANEOUS RECEIPTS						
Corn	Potatoes	Vegetables			Milk	Butter	Eggs	Honey		Horses	Cows	Hogs	Poultry	Outside Labor	Rent	Real Estate
										100						
						7 50	4 60	6 30								
															15	
						7 50	4 60	6 30		100						

The use of this form is only necessary for the large farm employing a large number of men. This record is a convenient form to make a carbon copy for a distant owner of a farm to analyze the labor costs.

FROM July 1st 1915 TO 19 NO. 3

HARVESTING COSTS							OVERHEAD COSTS			DIVERSIFIED COSTS				
Making Boxes	Haul to and from Orchard	Picking	Sorting	Packing	Waiting on Packers	Nailing and Stamping	Management	Repairing	Feed	Land Improvements	Building	Alfalfa or	Live Stock	Personal
												17 75		
								10			9 25		9	
				10		15								
10 50		22 50		12	3 25									
		18												
10 50		40 50		22	3 25	15		10			9 25	17 75	9	

VALUE OF FARM AND EQUIPMENT

The value of real estate is amount paid for the property when purchased, plus the cost of improvements since the time of purchase. The actual productive value of real estate can be obtained from the summary in form 8, after a farm record has been kept for a few years. The real estate value should be the same at the end of the year unless improvements have been made. The depreciation of build-

Tweeds System of Farm Accounting — TRADE MARK REGISTERED — FORM No. 6

RECORD OF A YEAR'S BUSINESS ON A FARM

Record for the year beginning January 1915 and ending December 1916

Name . . . . Post Office . State

Miles from market . Name of Railroad . Farm Area 15

No. of acres tillable 15 . Not tillable . Water, Roads, Etc.,

Owner ~~or Renter~~ Cash rent Share rent

Value of farm, $15,000 . Average per acre $1,000 . Water right per acre $

Value of house $2,000 . Barn $200. . Storage $250. . Packing shed $

Other buildings $50. Amount paid for land when purchased

VALUE OF FARM AND EQUIPMENT

Real Estate and Buildings	first of year $17,500.	end of year $17,500.	
Live Stock	first of year $ 790.	end of year $ 915.	
Machinery and Tools	first of year $ 882.	end of year $ 783.	
Hay, Feed, Apples, Etc.	first of year $ 60.	end of year $ 60.	
Bills Receivable	first of year $	end of year $ 50.	
Cash on hand and in bank	first of year $ 100.	end of year $ 100.	
Total Investment	19,332.	19,408	$19,408
Bills Payable			$
Net Worth			$

Average Capital $19,370

Increase or Decrease $ 76

STOCK RECEIPTS	AMOUNT	RATE	TOTAL	MISCELLANEOUS	AMOUNT	RATE	TOTAL
Market Milk		$	$	Labor		$	$
Creamery Milk				Team Work	10	5.00	50.00
Butter	100 lbs	.30	30.00	Machine Work			
Cheese				Cash Rent for			15.00
Wool				Rent of Buildings			
Eggs	16 doz	.25	4.00				
Hides							
Honey							
Total			34.00	Total			65.00

ings will vary with the use and the location. Five per cent is considered a general average.

The average capital is obtained by adding the total investment the first and end of the year, and divide by 2.

The records for stock and miscellaneous receipts are listed on form 3.

INVENTORY

The inventory should be taken at the time the accounts are opened and closed. Only the one inventory is necessary for closing one year's account and opening the next, making it possible to do all the work at one time.

The depreciation of farm machinery will vary with the kind of implement, the care given it, and the district in which your farm is located. A depreciation of 10% is considered an average for all farm implements.

Tweeds System of Farm Accounting
TRADE MARK—REGISTERED

FORM NO. 7

INVENTORY

MACHINERY	1915 No	1915 Rate	1915 Value	1916 No	1916 Rate	1916 Value	MACHINERY	1915 No	1915 Rate	1915 Value	1916 No	1916 Rate	1916 Value
Heavy Wagons	1		$ 90	1		$ 81	Automobile		$	$		$	$
Light Wagons							Auto Trucks						
Pleasure Wagons							Caterpillar						
Sleighs							Packing Press	1		12	1		10
Walking Plows	1		15	1		13	Packing Benches						
Sulky or Gang Plows							Stamping Machines	1		15	1		14
Disc Harrows	1		50	1		45	Orchard Ladders	2	8	16	2	7	14
Spike-tooth Harrows							Picking Buckets	8	1	8	8	1	8
Spring-tooth Harrows	1		24	1		21	Sprayer	1		425	1		375
1-Horse Cultivators	1		5	1		5	Spraying Plant						
Large Cultivators							Hand Sprayer						
Weeder Cultivators							Gasoline Engine						
Roller							Pruning Tools	6	1.50	9	5	1.	5
Corn Planter	1		24	1		22	Wood Saws						
Potato Planter							Evaporator						
Grain Drill							Minor Equipment						
Garden Planter							Cream Separator	1		35	1		30
Mowing Machine	1		65	1		60	Dairy Utensils						
Hay Rake	1		32	1		30	Poultry Equipment						
Hay Fork and Stacker							Bee Equipment						
Potato Digger							Work Harness	1		55	1		50
Grain Binder							Lawn Mowers						
Header Binder													
Total	$		305	8		277	Total	21		575	20		506

LIVE STOCK

ANIMALS—KIND	1915 No	1915 Value	1915 Total	1916 No	1916 Value	1916 Total	PURCHASED No	PURCHASED Value	PURCHASED Total	SOLD No	SOLD Value	SOLD Total	DIED No.
Cows	1		$ 90.	3	$ 75	225	$	$			$	$	
Heifers	2	40	80	1		40							
Calves	1		20										
Bulls													
Steers													
Horses	2	250	500.	2	250	500							
Mules													
Colts	1		60	1		70							
Ewes													
Lambs													
Brood Sows													
Other Hogs													
Pigs													
Chickens	40	1.00	40	50	1.00	50	5	3.00	15.	20	1.00	20	2
Turkeys													
Ducks													
Bees	5	6.00	30	6	5.00	30				3	6.00	18	
Total			810			915			15			38	

The inventory on live stock should be taken when the accounts are opened and closed. In illustration above it is noted that young stock increases in value from the first of the year to the end of the year. Many animals may decrease in value from the first of the year to the end of the year due to condition, age, etc.

The figures giving the purchases and sales of live stock are obtained from forms 2 and 3.

CROP RECORD

To keep accurate record of acreage of different crops the tabulation should be made at the time of planting or seeding. The record of farm sales is obtained from form 3. The production cost is obtained from forms 1 and 2. The difference between farm sales and production cost equals the net worth, for both total and per box, per bushel, and per ton, etc.

Tweeds System of Farm Accounting — TRADE MARK REGISTERED — FORM 8

CROPS FOR YEAR OF 1915

CROPS	YIELD			FARM SALES			Production Costs		NET PROFIT	
Kind	Acres	Per Acre	Total	Amount	Price	Value	Total	Per	Total	Per
					$	$	$		$	
Corn										
Corn for Silage										
Potatoes	1		70 bu	30	1.00	30.00				
Field Beans										
Roots, kind										
Wheat										
Oats										
Barley										
Rye										
Straw										
Seeds										
Hay										
Alfalfa	5	4	20							
Berries										
Apples	14½	400	6000	5,950	1.00	5,950.	3,570	.60	2380.	.40
Pears										
Peaches	½		180	100	.30	30	19	.19	11.	.11
Total						6,010.00				

SUMMARY

Average Capital		$ 19,370.00
RECEIPTS		
Crops (Form 8)	$ 6,010.	
Live Stock Sold (Form 7)	$ 38	
Stock Products (Form 6)	$ 34	
Miscellaneous (Form 6)	$ 65	
Increase in Capital (Form 6)	$ 76	
Total Receipts		$ 6,223.00
EXPENSES		
Cash Farm Expenses (Form 8)	$ 4,191.00	
Live Stock Purchased (Form 7)	$ 15.00	
Other Expenses, not cash (Form 1)	$ 1,017.00	
Decrease in Capital Form 6)	$	
Total Expenses		$ 5,223.00
Income from Capital and Labor		$ 1,000.00
Interest on Capital at. 6 %		$ 1,549.60
Labor Income		$ −549.60 LOSS

SUMMARY

The amount showing the average capital is obtained from form 6. The use of receipts and expenses is illustrated above.

The income on capital and labor is the difference between expenses and receipts. The interest on capital is obtained by multiplying the rate of interest times the average capital. Subtracting the interest on capital from income on capital and labor gives the labor income.

THE COST OF PRODUCTION

The figures giving the *growing* and *overhead* cost can be obtained from forms 1 and 2.

The cost of producing a box of apples or other fruits is obtained by dividing the total cost of growing or overhead into the total number of boxes of fruit produced. The cost of taxes per box is obtained by simple division. To determine the growing or overhead cost per acre, divide the number of acres into the total growing or overhead cost.

Tweeds System of Farm Accounting
TRADE MARK REGISTERED

F 10

COST OF PRODUCING A BOX OF Apples

GROWING COSTS	1915	Next year's Estimate	OVERHEAD COSTS	1915	Next year's Estimate
Pruning	77	85	Management		
Brush Picking			Repairing	4 89	
Spraying	43	50	Feed	15	
Tree Care	18		Taxes	25 31	
Cultivation	53	49	Water Assessments	28	
Irrigation and Ditching	29 80		Interest on Investment	320	
Cover Crops			Depreciation on Equipment		
Fertilizers	8	15	Insurance on Buildings		
Thinning	39		Blacksmithing, Hardware, Etc.		
Propping	11		Depreciation on Buildings	25	
Spray Materials			Interest on Money to move crops		
TOTAL	278 80		TOTAL	418 20	
Growing Cost per Box	10		Overhead Cost per Box	15	
Growing Cost per Acre	55 76		Overhead Cost per Acre	83 64	

HARVESTING COSTS

VARIETY	Picking	Haul to and from Orchard	Sorting	Packing	Haul to and from Town	Stamping and Nailing	Making Boxes	Nails	Paper	Boxes	Waiting on Pickers	Total
Winesaps	54 72	13 68	41 04	68 40	54 72	13 68	13 68	6 84	41 04	143 64	13 68	465 12
Cost per Box	.04	.01	.03	.05	.04	.01	.01	.005	.03	.105	.01	.34
Spitzenburg	44 00	11.00	55.00	55.00	44 00	11.00	11.00	5.50	33.00	115 05	11 00	346 00
	.04	.01	.05	.05	.04	.01	.01	.005	.03	.105	.01	.31
Ben Davis	12 80	3.20	12 80	16.00	12 80	3.20	3.20	1.60	9.60	33 60	3.20	112 00
	.04	.01	.04	.05	.04	.01	.01	.005	.03	.105	.01	.35
Total												973 12
Per Box	.04	.01	.04	.05	.04	.01	.01	.005	.03	.105	.01	.35
Growing and Overhead												.25
TOTAL												.60

HARVESTING COST

The cost of picking, sorting, packing, etc., of the different varieties is obtained by marking the initial of the variety on the labor sheet when the operation is being performed. See the above form for illustration.

To find the costs of harvesting the different kinds of fruit the same method can be used as explained above.

It is not advisable to keep the harvesting cost of all varieties unless the grower desires to eliminate varieties that cost more to produce than returns he receives.

FORM 10

Tweeds System of Farm Accounting
TRADE MARK REGISTERED

INCOME SEGREGATION OF *Apples*

SHOWING NET F. O. B. RETURNS FROM *Growers Association* ALL CHARGES OF EVERY NATURE HAVING BEEN DEDUCTED INCLUDING DISTRIBUTION COST OF *10¢* PER BOX.

VARIETY	EXTRA FANCY		FANCY		C GRADE		BY-PRODUCTS			
	Boxes	Average	Boxes	Average	Boxes	Average	Boxes	Average	Boxes	Average
Winesap	*930*	*121*	*328*	*1.05*	*110*	*.60*				
Spitzenburg	*612*	*147*	*256*	*1.15*	*132*	*.60*				
Ben Davis	*160*	*.56*	*96*	*.46*	*64*	*36*				
TOTAL	*1772*	*1.08*	*710*	*.88+*	*306*	*52*				

SUMMARY TABLE OF GROSS AND NET RETURNS

	EXTRA FANCY			FANCY			C GRADE			BY-PRODUCTS					
	Boxes	Recpt	Average	Boxes	Recpt	Average	Boxes	Recpt	Average	Boxes	Recpt	Average	Boxes	Recpt	Average
	1772		*1.08*	*710*			*306*		*52*						
Gross Income					*6248.00*	*.88+*									
Total Expense					*4268.00*										
Per Box			*.60*						*.60*						
Net Return			*.48*		*1980*				*-.08*						

VARIETY	Ex Fncy Per Ct	Fncy Per Ct	C Grade Per Ct	By Prod Per Ct	Per Ct	Lge Per Ct	Smlr Per Ct	No Trees Over 5 yrs	Boxes Per Tree	Nat Yrs Estimate	No Trees Under 5 yrs
Winesap	*68%*	*24%*	*8%*			*48%*	*52%*	*228*	*6*	*7½*	*4*
Spitzenburg	*62%*	*26%*	*12%*			*82%*	*17%*	*220*	*5*	*6*	
Ben Davis	*50%*	*30%*	*20%*			*60%*	*40%*	*40*	*8*		
Total								*488*			

INCOME SEGREGATION

The data for the returns of the different varieties, grades, boxes and averages can be obtained from the selling agency when returns are made. If cash sales are made this information can be obtained from form 3.

The average return per box of one grade and all varieties is obtained by adding the averages and divide by the number of varieties. Above for illustration.

The method of finding the net returns is by subtracting the cost of producing a box from the general average or from any variety or grade. Form 10 for illustration showing costs:

PERCENTAGE OF GRADES, INVENTORY, ETC.

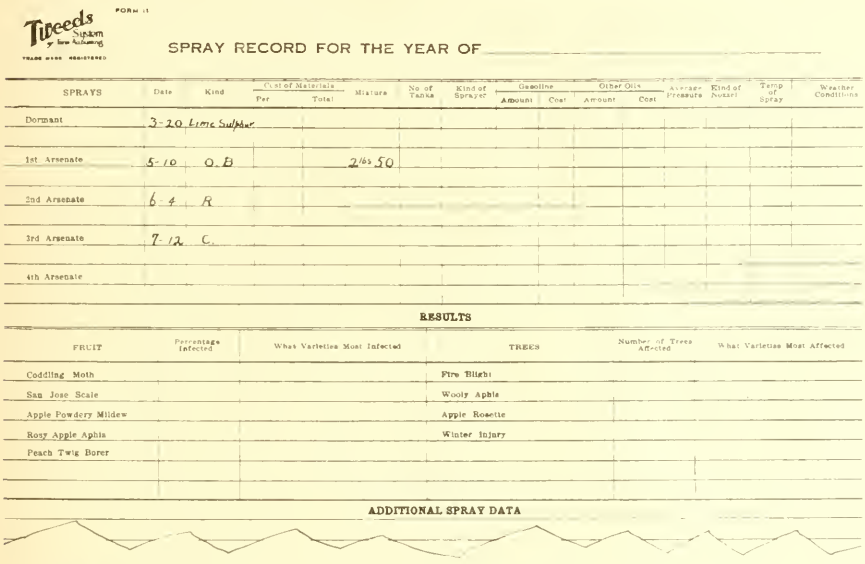
The percentages of grades of different varieties, grades, and sizes are of value in determining the amount of thinning and pruning that is necessary to obtain a high percentage of extra fancy fruit.

Keeping the inventory of the number of trees of the different varieties cannot be urged too strongly. This in normal years will assist in getting estimates of the different varieties before the beginning of the fruit season.

SPRAYING RECORD

The spray record is useful for keeping data on the different spraying operations. This form is also of value in determining the cost of different spray materials, gasoline and other oils.

In keeping this record accurate the grower must keep the daily record of the



FORM 11

Tweeds System of Farm Accounting

TRADE MARK REGISTERED

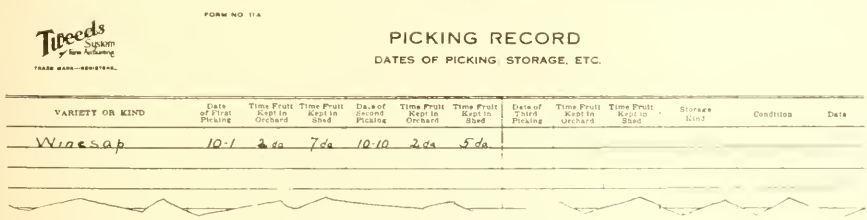
SPRAY RECORD FOR THE YEAR OF _____

SPRAYS	Date	Kind	Cost of Materials Per	Cost of Materials Total	Mixture	No. of Tanks	Kind of Sprayer	Gasoline Amount	Gasoline Cost	Other Oils Amount	Other Oils Cost	Average Pressure	Kind of Nozzel	Temp of Spray	Weather Conditions
Dormant	3-20	Lime Sulphur													
1st Arsenate	5-10	O.B			2 lbs 50										
2nd Arsenate	6-4	R													
3rd Arsenate	7-12	C.													
4th Arsenate															

RESULTS

FRUIT	Percentage Infected	What Varieties Most Infected	TREES	Number of Trees Affected	What Varieties Most Affected
Codling Moth			Fire Blight		
San Jose Scale			Woolly Aphis		
Apple Powdery Mildew			Apple Rosette		
Rosy Apple Aphis			Winter Injury		
Peach Twig Borer					

ADDITIONAL SPRAY DATA



FORM NO 11A

Tweeds System of Farm Accounting

TRADE MARK—REGISTERED

PICKING RECORD

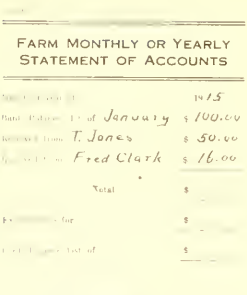
DATES OF PICKING, STORAGE, ETC.

VARIETY OR KIND	Date of First Picking	Time Fruit Kept in Orchard	Time Fruit Kept in Shed	Date of Second Picking	Time Fruit Kept in Orchard	Time Fruit Kept in Shed	Date of Third Picking	Time Fruit Kept in Orchard	Time Fruit Kept in Shed	Storage Kind	Condition	Date
Winesap	10-1	2 da	7 da	10-10	2 da	5 da						

PICKING RECORD

number of tanks applied, mixture, pressure and temperature. The record of date, kind and costs of materials can be obtained from the labor and expense sheets.

The information for the picking record can be obtained easily from the labor sheet, provided the initial of each variety is marked in the column for the date of picking, the date of hauling from orchard and the date hauled to town. This

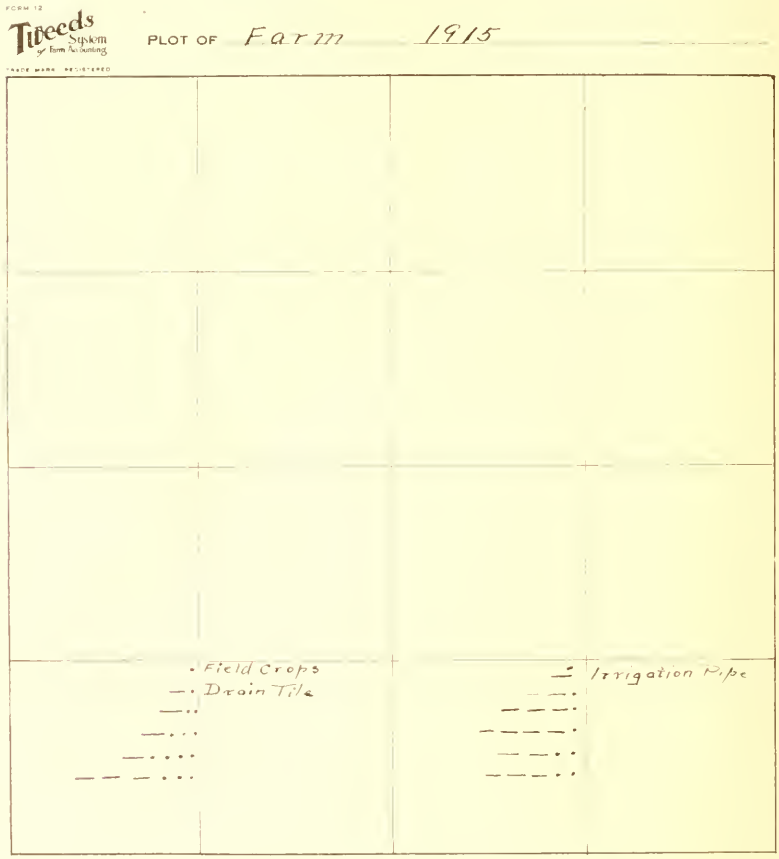

FARM MONTHLY OR YEARLY STATEMENT OF ACCOUNTS

	1915
Balance 1st of January	$ 100.00
Received from T. Jones	$ 50.00
Received from Fred Clark	$ 16.00
Total	$
Expended for	$
Balance 1st of	$

record can be approximated for each picking. These records can be compared with the cold storage records and in this way accurate record can be obtained as to the keeping qualities of the different varieties.

FARM STATEMENT OF ACCOUNTS

When deposits are made with the bank the amounts should be entered on form 5. This form serves the purpose of balancing the financial accounts with the bank when the accounts are closed. The use of "Economick" check book will work in readily with this system of accounting.



FARM PLOT

The farm plot serves the purpose of locating drain tile, pipe and flume lines, field crops, buildings, home garden, roads, woods, orchard, etc.

The dash and dot system is one of the simplest methods of locating the different fields, varieties, etc.

The use of the farm plot cannot be urged too strongly as a yearly record.

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